This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

Claim 1 **(Previously Presented)** A device for separating at least one compound from a mixture by adsorption with a simulated moving bed, comprising at least:

an enclosure or column comprising adsorbent beds (Ai), at least two adsorbent beds being separated by at least one fluid distribution and extraction plate (Pi), the plate comprising one or more panels allowing distribution, mixing and/or extraction of fluids, each panel comprising a single distribution, mixing and/or extraction chamber (Ci),

a plurality of lines (10, 11, 12, 13, Ti) for extraction or injection of secondary fluids,

a bypass circuit communicating a distribution plate with at least one bypass line (Li,j), wherein the device comprises means (14, Voi,j, 20) for communicating said at least one single distribution, mixing and/or extraction chamber (Ci) with at least one bypass line (Li,j),

at least one end of said at least one bypass line communicates with a zone (Ri, R'i) of an adsorbent bed, said zone being distinct from any distribution chamber, and another end of said at least one bypass line is connected to chamber (Ci).

Claim 2 **(Previously Presented)** A device as claimed in claim 1, wherein said means for communicating (C_1) with (Li,j) comprises at least one valve (Voi,j) arranged on at least one bypass line (Li,j) and in that an end of the bypass line that is not connected to the zone of the adsorbent bed is connected to a delivery and/or extraction line (Ti), which line (Ti) is connected to chamber (Ci).

Claim 3 **(Previously Presented)** A device as claimed in claim 1, wherein said means for communicating (Ci) with (Li,j) comprises at least one rotary valve (20), said rotary valve being connected to at least one delivery and/or extraction line (Ti) and to at least one bypass line

(Li,j), said valve comprising means allowing at least to communicate a delivery and/or extraction line with at least one bypass line.

Claim 4 **(Previously Presented)** A device as claimed in claim 3, wherein said rotary valve (20) is in communication with a plurality of groups of lines, group G_1, group G_2 and group G_3, said valve comprising:

- a stator (110) provided with several means (E, F, R, S) for circulation of a fluid(s) of a group G_1, means (115, 116) allowing passage of at least two fluids F_1, F_2 belonging to group G_3, said means (115, 116) comprising a substantially equal number of passages, means (115) having a flow section S_1,means (116), having a flow section S_2, different from S_1,
- a rotor (117) equipped with means (119) for passage of fluids of a group G_3 and means (120) for communication of either the fluids of group G_1 with group G_3, or of group G_3 with group G_3, and
- means (122) for communicating at least two fluids of group G_3.

Claim 5 **(Previously Presented)** A device as claimed in claim 4, wherein the means for passage of fluid F_1 and of fluid F_2 have flow sections S_1 and S_2 respectively, wherein S_1/S_2 ratio is 2 to 10.

Claim 6 **(Previously Presented)** A device as claimed in claim 4, said means communication of fluids of group G_3 consists of slots (122) provided in a layer of material or liner deposited on the lower face of the rotor.

Claim 7 **(Previously Presented)** A device as claimed in claim 6, wherein a slot (122) has a depth at least equal to the thickness of the liner.

Claim 8 **(Previously Presented)** A device as claimed in claim 6, wherein said circulation means (E, R, S, F) comprises a plurality of grooves arranged on an upper face of the stator and slots (122) are provided in the liner.

Claim 9 **(Previously Presented)** A device as claimed in claim 4, wherein circulation means (E, R, S, F) are 4 in number.

Claim 10 **(Previously Presented)** A device as claimed in claim 1, wherein said enclosure comprises a non-perforated central tube over at least part of the length thereof, and the panels forming a plate comprise a tangential cutout; and wherein zone (Ri, R'i) comprises at least one diverted fluid distribution means (53, 54), and the end of bypass line (Li,j) connected to chamber (Ci) opens into said diverted fluid distribution means (53, 54).

Claim 11 **(Previously Presented)** A device as claimed in claim 10, wherein a fluid distribution circuit is arranged around said enclosure and comprises a main line (61) divided into a plurality of secondary lines (62, 63, 62a, 62b) so that the fluid(s) reach the panels forming a plate substantially at the same time.

Claim 12 **(Previously Presented)** A device as claimed in claim 10, wherein the plates form a parallel cutout and in that the fluid distribution circuit comprises a main line, and a bypass line connected to an adsorbent bed by means of a device comprising transfer ports.

Claim 13 **(Previously Presented)** A device as claimed in claim 1, wherein a plate is delimited by a lower grid (6) and an upper grid (7) and in that an end of the bypass line connected to the adsorbent bed is connected to a distribution means (30) arranged above said upper grid.

Claim 14 **(Previously Presented)** A device as claimed in claim 1, wherein a plate comprises a plurality of panels forming a radial cutout, the enclosure comprises a central tube and a secondary fluid distribution ring in communication with a distribution plate, and a diverted fluid distribution means, said means being arranged below the distribution ring and said means being connected to the end of the bypass line, said bypass line being connected to a zone of an adsorbent bed.

Claim 15 **(Previously Presented)** A device as claimed in claim 14, wherein said diverted fluid distribution means comprise at least one diverted fluid distribution ring (53), said ring (53) being arranged in a perforated means (55), said means having a substantially conical shape.

Claim 16 **(Previously Presented)** A device as claimed in claim 10, wherein said perforated means comprises a wall (55) forming an angle α with the central tube and in that said ring (53) is located at a distance a from said grid.

Claim 17 **(Previously Presented)** A device as claimed in claim 1, wherein said column comprises a substantially central mast comprising one or more mast elements (80), including at least:

- an upper part (81),
- A distibutor-collector part (82) comprising one or more secondary ports (86i) and at least one main port (85), the flow sections of ports (85) and (86i) being different,
- a lower part (83)
- a distibutor-collector part(s) (82) are arranged between an upper part (81) and a lower part (83)
- a sealing element (84a) arranged between distributor-collector part (82) and lower part (83),
- a separation element (87) arranged on distributor-collector part (82), thus delimiting two fluid circulation spaces (82a, 82b).

Claim 18 **(Currently Amended)** In a process comprising injection of a diverted fluid in a simulated moving bed separation process, comprising at least the following stages:

circulating a main fluid through a plurality of adsorbent beds in an enclosure, at least two adsorbent beds being separated by at least one fluid distribution and extraction plate (Pi), the plate comprising one or more panels allowing distribution, mixing and/or extraction of fluids, said panels each comprising a single distribution, mixing and/or extraction chamber

injecting and extracting secondary fluids comprising feed, desorbent, extract and raffinate according to a sequential order to achieve separation of the constituents of the feed,

injecting a diverted fluid,

the improvement wherein at least part of the main fluid is circulated outside the enclosure allowing separation by means of a bypass line comprising at least two ends, one end being connected to a zone of an adsorbent bed distinct from distribution chambers so as to inject and to extract part of the main fluid in the zone, and another end of said bypass line being connected to chamber (Ci).

Claim 19 **(Canceled)**

Claim 20 **(Previously Presented)** A process as claimed in claim 18, wherein a fraction of the main fluid is drawn off from a zone of an adsorbent bed Ai and said fraction is injected into a chamber Ci.

Claim 21 **(Previously Presented)** A process as claimed in claim 18, wherein paraxylene is separated from aromatic hydrocarbon-containing feeds with eight carbon atoms.

Claim 22 **(Previously Presented)** A device according to claim 5, wherein the S_1/S_2 ratio is about 4.

Claim 23 **(Canceled)**

Claim 24 **(Previously Presented)** A device according to claim 1, comprising at least one bypass line Li,j with j=i+1, in which a fluid is diverted from a chamber (Ci) to a zone (Ri+1).

Claim 25 **(Previously Presented)** A process as claimed in claim 18, wherein a fraction of the main fluid is drawn off from a chamber (Ci) corresponding to a plate Pi and the main fluid fraction drawn off is injected into a zone of adsorbent bed Ai+1.

Claim 26 (Currently Amended) A device for separating at least one compound from a mixture by adsorption with a simulated moving bed, comprising at least:

an enclosure or column comprising adsorbent beds (Ai), at least two adsorbent beds being separated by at least one fluid distribution and extraction plate (Pi), the plate comprising one or more panels allowing distribution, mixing and/or extraction of fluids, each panel comprising a single distribution, mixing and/or extraction chamber (Ci),

a plurality of lines (10, 11, 12, 13, Ti) for extraction or injection of secondary fluids,

a bypass circuit communicating a distribution plate with at least one bypass line (Li,j), wherein

the device comprises means (14, Voi,j, 20) for communicating said ~~at least one~~ single distribution, mixing and/or extraction chamber (Ci) with at least one bypass line (Li,j),

at least one end of said at least one bypass line communicates with a zone (Ri, R'i) of an adsorbent bed, said zone being distinct from any distribution chamber, and another end of said at least one bypass line is connected to chamber (Ci).